ABSTRACT OF THE DISCLOSURE

To realize TFT enabling high-speed operation by fabricating a crystalline semiconductor film in which positions and sizes of crystal grains are controlled and using the crystalline semiconductor film in a channel forming region of TFT, a film thickness is stepped by providing a stepped difference in at least one layer of a matrix insulating film among a plurality of matrix insulating films having refractive indices different from each other. By irradiating laser beam from a rear face side of a substrate (or both sides of a surface side and the rear face side of the substrate), there is formed an effective intensity distribution of laser beam with regard to a semiconductor film and there is produced a temperature gradient in correspondence with a shape of the stepped difference and a distribution of the film thickness of the matrix insulating film in the semiconductor film. By utilizing thereof, a location of producing lateral growth and a direction thereof can be controlled to thereby enable to provide crystal grains having large particle sizes.